TO STUDY THE EFFECT OF DIFFERENT SINTERING TEMPERATURE ON FERUM HYDROXIDE

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We declared that this thesis is the result of our own work except the ideas and summaries which we have clarified their sources. The report has not been accepted for any diploma and is not concurrently submitted in candidature of any diploma.

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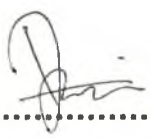

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ABSTRACT

Sintering is an operation involving the heating of ferrous or non-ferrous material below the melting temperature. By doing a sintering with different temperature, it will result in different characteristic to the material properties.

The project is about the effect of different sintering temperature on ferum hydroxide, $Fe(OH)_3$. Ferum hydroxide, $Fe(OH)_3$ was used as a sample, which was produced by chemical reaction of adding natrium hydroxide, NaOH to ferum chloride, $FeCl_3$. The sample is centrifuged prior to separate ferum hydroxide, $Fe(OH)_3$ from the aqueous. The centrifuge machine is used in this process. Different temperature in the sintering process ranging from 300°C to 700°C was used to study the effect of sintering process to the sample.

Once the sintering process is completed, Magnetic Field Logger equipment is used to determine the magnetic field of the sample. The composition of the sample is also checked using the X-Ray Diffraction machine.